

Application No. 10/634,217
Amdt. dated January 28, 2004
Reply to Office Action of December 18, 2003

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1. (currently amended) A filled synthetic turf comprising:

a foundation;

a backing residing on the foundation;

a plurality of grass-like pile filaments secured to the backing and extending generally upwardly therefrom; and

a particulate fill material residing on the backing to a desired height, the pile filaments extending above the fill material, the fill material including,

a first lower layer of consisting essentially of gravel located on the backing and a second upper layer of resilient particles, wherein the first lower layer provides weight for holding the backing and the second upper layer provides resiliency for the synthetic turf.

Claim 2. (original) The filled synthetic turf of claim 1 wherein the pile filaments comprise synthetic ribbons of selected length.

Claim 3. (original) The filled synthetic turf of claim 1 wherein the first lower layer comprises pea gravel.

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Claim 4. (original) The filled synthetic turf of claim 1 wherein the second upper layer comprises synthetic particles.

Claim 5. (original) The filled synthetic turf of claim 4 wherein the synthetic particles are rubber.

Claim 6. (original) The filled synthetic turf of claim 1 wherein the height of the first lower layer is about equal to the height of the second upper layer.

Claim 7. (Currently amended) ~~The filled synthetic turf of claim 1 and further comprising:~~

A filled synthetic turf comprising:

a foundation;

a backing residing on the foundation;

a plurality of grass-like pile filaments secured to the backing and extending generally upwardly therefrom; and

a particulate fill material residing on the backing to a desired height, the pile filaments extending above the fill material, the fill material including,

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a first lower layer of gravel located on the backing and a second upper layer of resilient particles, wherein the first lower layer provides weight for holding the
backing and the second upper layer provides resiliency for the synthetic turf;
a subsurface residing between the foundation and the backing, the subsurface including:

a subsurface backing with a plurality of subsurface pile filaments extending upwardly therefrom to a desired height;

a subsurface fill material residing on the subsurface backing to a desired vertical level relative to the desired height of the subsurface pile filaments including at least some resilient particles; and

a polymeric coating applied to the subsurface fill material and the subsurface pile filaments to hold the subsurface fill material in place.

Claim 8. (original) The filled synthetic turf of claim 7 wherein the composition of the subsurface fill material and the desired height of the subsurface pile filaments are selected to achieve a desired degree of shock absorption for the subsurface and for the synthetic turf located thereabove.

Claim 9. (original) The filled synthetic turf of claim 7 wherein subsurface fill material includes gravel in combination with the resilient particles.

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Claim 10. (original) The filled synthetic turf of claim 7 wherein the subsurface further comprises:

tubing residing within the subsurface fill material above the subsurface backing and below the tops of the subsurface pile filaments, the tubing adapted to be operatively connected to a pump to convey fluid within the tubing to selectively heat or cool the subsurface, to thereby heat or cool the filled synthetic turf.

Claim 11. (Original) The filled synthetic turf of claim 1 wherein said backing residing on the foundation is water permeable.

Claim 12. (Currently amended) A filled synthetic turf comprising:

a foundation;
a drainage member residing on the foundation;
a water permeable backing residing on the drainage member;
a plurality of grass-like pile filaments secured to the backing and extending generally upwardly therefrom; and
a particulate fill material residing on the backing to a desired height, the pile filaments extending above the fill material, the fill material including,
a first lower layer consisting essentially of gravel located on the backing and a second upper layer of resilient particles, wherein the first lower layer

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provides weight for holding the backing and the second upper layer provides resiliency for the synthetic turf.

Claim 13. (original) The filled synthetic turf of claim 12 wherein said pile filaments are grass-like fibers.

Claim 14. (original) The filled synthetic turf of claim 12 wherein said gravel comprises particles having a diameter greater than 2 millimeters.

Claim 15. (Cancelled)

Claim 16. (Currently amended) A method of constructing a filled synthetic turf on a foundation, comprising:

placing a backing on the foundation, a plurality of pile filaments being secured to the backing and extending generally upwardly therefrom;

filling a first layer of particulate fill material on the backing to a desired height, the pile filaments extending above the first layer of fill material, the first layer of fill material including a ~~first lower layer of consisting essentially of~~ gravel; and located on the backing and a second upper layer of resilient particles, wherein the first lower layer provides weight

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~~for holding the backing on the foundation and the second upper layer provides resiliency for the synthetic turf~~

filling a second layer of particulate fill material on the first layer of particulate fill material to a desired height, the pile filaments extending above the second layer of particulate fill material, the second layer of particulate fill material including resilient particles.

Claim 17. (Currently Amended) A method of constructing a filled synthetic turf on a foundation, comprising:

placing a drainage member on the foundation,
placing a water permeable backing upon the foundation, a plurality of pile filaments being secured to the backing and extending generally upwardly therefrom;
filling a particulate fill material on the backing to a desired height, the pile filaments extending above the fill material, the fill material including a first lower layer consisting essentially of gravel located on the backing and a second upper layer of resilient particles, wherein the first lower layer provides weight for holding the backing on the foundation and the second upper layer provides resiliency for the synthetic turf.

Claim 18. (Cancelled)

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Claim 19. (original) An athletic surface comprising:

a foundation;

a subsurface layer supported by the foundation and a surface layer comprising a filled synthetic turf supported by the subsurface layer, the subsurface layer comprising a subsurface flexible backing with a plurality of grass-like subsurface pile filaments extending generally upwardly therefrom to a desired height;

a subsurface fill material residing on the subsurface backing, the subsurface fill material including at least some rubber particles, wherein the composition of the subsurface fill material and the desired height of the subsurface pile filaments are selected to achieve a desired degree of shock absorption for the surface; and

a tubing circuit residing within the subsurface fill material above the subsurface backing and below the tops of the subsurface pile filaments, the tubing circuit adapted to convey fluid within the subsurface tubing circuit, thereby to selectively heat or cool the subsurface layer.

Claim 20. (original) The athletic surface of claim 19 wherein the filled synthetic turf of the surface layer comprises a surface backing residing on the subsurface layer and a plurality of pile filaments secured to the surface backing and extending generally upwardly therefrom, and a particulate surface fill material residing on the surface backing to a desired height, the surface pile filaments extending above the surface fill material.

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Claim 21. (original) The athletic surface of claim 19 and further comprising,
a binder holding the subsurface fill material and the subsurface pile filaments
together in place and holding the subsurface fill material and the subsurface pile
filaments to the subsurface backing.

Claim 22. (original) The athletic surface of claim 21 wherein the binder is a polymeric
binder.

Claim 23. (original) The athletic surface of claim 20 wherein the surface fill material
includes at least one layer of gravel located on the surface backing.

Claim 24. (original) The athletic surface of claim 19 wherein the foundation includes at
least one layer of drainage members.

Claim 25. (original) An athletic surface comprising:

a foundation;
a drainage member residing on the foundation;
a subsurface layer supported by the foundation and a surface layer comprising a
filled synthetic turf supported by the subsurface layer, the subsurface layer comprising
a subsurface flexible backing with a plurality of grass-like subsurface pile
filaments extending generally upwardly therefrom to a desired height;

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a subsurface fill material residing on the subsurface backing, the subsurface fill material including at least some rubber particles, wherein the composition of the subsurface fill material and the desired height of the subsurface pile filaments are selected to achieve a desired degree of shock absorption for the surface.

Claim 26. (original) The athletic surface of claim 25 wherein the surface fill material includes at least one layer of gravel located on the surface backing.

Claim 27. (original) The athletic surface of claim 25 wherein the subsurface fill material includes at least one layer of gravel located on the subsurface backing.

Claim 28. (New) An athletic surface comprising:

a foundation;
a drainage member residing on the foundation;
a subsurface layer supported by the foundation, the subsurface layer comprising a subsurface flexible backing with a plurality of grass-like subsurface pile filaments extending generally upwardly therefrom to a desired height;
a surface layer supported by the subsurface layer;
a subsurface fill material residing on the subsurface backing, the subsurface fill material including at least some rubber particles, wherein the composition of the

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subsurface fill material and the desired height of the subsurface pile filaments are selected to achieve a desired degree of shock absorption for the surface.

Claim 29. (New) A filled synthetic turf comprising:

- a foundation;
- a subsurface backing residing supported by the foundation with a plurality of subsurface pile filaments extending upwardly therefrom to a desired height;
- a subsurface fill material residing on the subsurface backing to a desired vertical level relative to the desired height of the subsurface pile filaments including at least some resilient particles; and
- a polymeric coating applied to the subsurface fill material and the subsurface pile filaments to hold the subsurface fill material in place;
- a surface backing residing on the subsurface fill material;
- a plurality of grass-like pile filaments secured to the surface backing and extending generally upwardly therefrom; and
- a particulate surface fill material residing on the surface backing to a desired height, the pile filaments extending above the surface fill material, the surface fill material including at least some resilient particles.

Claim 30. (New) An athletic surface comprising:

- a foundation;

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a subsurface layer supported by the foundation and a surface layer comprising a filled synthetic turf supported by the subsurface layer, the subsurface layer comprising a subsurface flexible backing with a plurality of grass-like subsurface pile filaments extending generally upwardly therefrom to a desired height; a subsurface fill material residing on the subsurface backing, the subsurface fill material including at least some rubber particles, wherein the composition of the subsurface fill material and the desired height of the subsurface pile filaments are selected to achieve a desired degree of shock absorption for the surface; and means for heating or cooling the subsurface layer.